

ABSTRACT

The present invention relates to a microelectrode, a microelectrode array, and a method of manufacturing the microelectrode of which temperature can be controlled. The microelectrode comprises a sealed cavity formed in a silicon substrate for thermal isolation, a microheater formed on the sealed cavity, and an electrode heated indirectly by the microheater. According to the present invention, it is possible to manufacture with CMOS process the microelectrode and the microelectrode array which have excellent electric insulation and thermal isolation between a microheater and a silicon substrate, which has a small power consumption, which has high heating and cooling speed and which has no corrosion.